

## GRADE OF SERVICE AND FAIRNESS POLICY FOR BANDWIDTH RESERVATION SYSTEM

### ABSTRACT

A scheme for assigning priority levels to users based upon a history of their request for access to the resources. If a user has, over a historical period of time, made fewer demands than a stated amount, that user is given a higher priority than a user who has made greater use of the resources than their stated amount. Thus, users making the heaviest demand on the available resources are allocated fewer resources despite their demand, whereas users that make less demands for the resources are granted more of the resources they request. An additional feature of an access allocation scheme according to the present invention is to reserve at least some resources for the users at the lowest priority levels. Thus, even users being assigned to a lowest priority queue will be granted at least some access once in a while. A third feature in connection with the present invention is to use the time of continuous transfer as a threshold to drop a presently assigned priority. For example, when a user at a particular priority level has made continuous use of resources for a predetermined time, that user is reassigned to the next lowest priority level and its resources are taken away. The user is then required to vie again for access to resources at this lower priority level.